



IPSC  
Air Quality

# INTERMOUNTAIN POWER SERVICE CORPORATION

February 11, 2004

Mr. Rick Sprott, Director  
Utah Division of Air Quality  
Utah Department of Environmental Quality  
P.O. Box 144820  
Salt Lake City, Utah 84114-4820

Attention: Milka Radulovic, NSR Engineer

Dear Director Sprott:

## Response Discussion to Grand Canyon Trust Comments on the IPSC ITA

The Intermountain Power Service Corporation (IPSC) wishes to refute the basis for comments made by the Grand Canyon Trust and Sierra Club (Commenters) on the proposed Intent to Approve (ITA) for IPSC. Your office published for public comment an ITA for certain modifications at the Intermountain Power Project in Delta, Utah to which those comments were directed.

The following discussion is separated into three parts: First, we address the Commenters' arguments concerning the existing approval order for the Intermountain Power Project's (IPP) uprate project; second, we address the arguments regarding the current permitting action; and third, we present our recommendations.

### COMMENTS REGARDING EXISTING APPROVAL ORDER DAQE-049-02

It appears that the Commenters are essentially trying to reopen, if not invalidate, the already issued Approval Order DAQE-049-02 covering the IPP uprate project.

#### COMMENTERS' ISSUE 1 on DAQE-049-02:

AO DAQE-049-02 should have included enforceable and creditable permit conditions because IPSC was "clearly" netting out of PSD in the uprate. IPSC must have had creditable emissions in order to avoid PSD review.

#### IPSC RESPONSE:

IPSC did not "net out" of PSD. There was no request or need by IPSC to use contemporaneous emission reductions to net out of PSD on the uprate AO. IPSC intended and the AO requires actual emission reductions for each unit. IPSC clearly stated its intent to

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control actual emissions to meet the WEPCO projected representative actual emissions.<sup>1</sup> The Commenters also misuse the term "netting" insofar as they imply that actual reductions in emissions constitute netting. This is, of course, incorrect. At one point in its comments, the Commenters concede that net emission increases must be counted against actual emission reductions measured separately. New enforceable or creditable emission limits are not required under WEPCO except where contemporaneous emissions reductions are utilized to avoid PSD review. In fact, the preamble to the WEPCO rule<sup>2</sup> and other guidance and policy documents<sup>3</sup> specifically state that this is the case.

COMMENTERS' ISSUE 2 on DAQE-049-02:

Baselines were only calculated for SO<sub>2</sub> and PM<sub>10</sub>. Data should have been compiled for all pollutants for each unit, then tallied together.

IPSC RESPONSE:

Pre-NOI Baseline data (for calendar years 1999 and 2000) were presented for all PSD-regulated pollutants at IPP, including HAP's, excepting those not reasonably expected to be emitted from the facility. This data was calculated by adding together actual emissions from each unit.<sup>4</sup>

COMMENTERS' ISSUE 3 on DAQE-049-02:

IPSC did not provide projections for representative future actual emissions required by the WEPCO rule.

IPSC RESPONSE:

A full representation of post-modification emissions projected for the 24-month period following the change (annualized) was included in the original 4/4/2001 NOI submittal from IPSC, and was adjusted as the proposed project scope evolved. The projections included all PSD pollutants, including HAPs, that were reasonably expected to be emitted from the facility.<sup>5</sup>

COMMENTERS' ISSUE 4 on DAQE-049-02:

Projected representative actual emissions should include those emissions from increased hours of operations caused by the modifications.

<sup>1</sup> See IPSC's Notice of Intent dated 4/4/2001, and IPSC's NOI clarification dated 9/5/2001, e-mailed to UDAQ 9/7/2001.

<sup>2</sup> See 57 Fed. Reg. 32314, 32325 (July 21 1992): "The EPA does not, however, agree with comments that post-change emission estimates must always be made into permanent federally-enforceable permit conditions."

<sup>3</sup> See the Detroit Edison determination from EPA to Henry Nickel, dated May 23, 2000, which states that a utility making a change may use the actuals to future actuals test instead of accepting permit restrictions avoid PSD.

<sup>4</sup> EXCEL worksheet Attachments to IPSC's Notice of Intent dated 4/4/2001; EXCEL worksheet Attachments to IPSC's e-mail to UDAQ of 10/03/01.

<sup>5</sup> EXCEL worksheet Attachments to IPSC's Notice of Intent dated 4/4/2001; EXCEL worksheet Attachments to IPSC's correction letter dated 6/7/2001; EXCEL worksheet Attachments to IPSC's e-mail to UDAQ of 7/26/01; EXCEL worksheet Attachments to IPSC's e-mail to UDAQ of 10/03/01.

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IPSC RESPONSE:

IPSC did not make the modifications in order to increase the hours of operation at the facility. The IPP facility has no history of forced outages caused by circumstances that the modifications were intended to address. Most of the modifications were made in order to increase generation capacity at the facility. Any modifications made to address reliability concerns were preventative in nature, and not tied to forced outages. No increased hours of operation are attributable to the permitted modifications.<sup>6</sup>

COMMENTERS' ISSUE 5 on DAQE-049-02:

IPSC admitted in its NOI that the modifications will cause a net significant increase in emissions.

IPSC RESPONSE:

At no time did IPSC project a net significant increase for any pollutant. IPSC acknowledged in its calculations that an increase in coal flow by itself could cause increases in certain emissions. However, the project scope included methodology to control emissions below significance levels. Although the methodology changed throughout the application review process, the result was that the project would not cause a net significant increase in any regulated pollutant.<sup>7</sup>

The WEPCO rule allows this result. Specifically, representative future actual emission projections can consider the "physical and operational capabilities following the change."<sup>8</sup> IPSC utilized available methodologies in the uprate project to control emissions below significance levels.

COMMENTERS' ISSUE 6 on DAQE-049-02:

IPSC needed the low-NOx burner replacement to meet WEPCO as part of the project.

IPSC RESPONSE:

Although new low-NOx burners (LNB) were initially considered, IPSC ultimately chose to continue to control NOx emissions within the realm of normal operating methodologies historically available, with slight modifications. IPP determined that NOx is controllable on a per unit basis to levels well below any net significant increase, and the NOI was modified accordingly.<sup>9</sup>

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<sup>6</sup> See details of modifications and their purpose in the initial 4/4/2001 NOI, the 9/5/2001 NOI clarification, and associated e-mails and faxes.

<sup>7</sup> Id.

<sup>8</sup> See 57 Fed. Reg. at 32323.

<sup>9</sup> See IPSC's Notice of Intent dated 4/4/2001, and IPSC's NOI clarification dated 9/5/2001 and e-mailed 9/7/2001 in which new LNB's were dropped from the NOI.

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COMMENTERS' ISSUE 7 on DAQE-049-02:

The AO included new federally enforceable limits to essentially ensure no significant increase, appearing to make an "allowable to allowable" comparison. UDAQ should have required lower limits to meet WEPCO.

IPSC RESPONSE:

New permit conditions with lower federally enforceable limits ensure that the facility's potential-to-emit (PTE) does not increase while allowing operating flexibility. Limiting all emissions to WEPCO levels at no net significant increases is not practical. The requirement under WEPCO<sup>10</sup> is that there not be significant increases due to the modifications. Increases not associated with the project are excluded from the net significant increase determinations. Since the uprate project increased capacity, new limits were put in place to maintain current PTE, and must still be met regardless of whether or not emissions are from the modification. This allows IPP to operate up to allowable emission levels which may be above WEPCO limits where emissions are not a result of the modification, yet the allowable limits preclude significant increases in overall emissions.

COMMENTERS' ISSUE 8 on DAQE-049-02:

The uprate modification permit should have undergone a Best Available Control Technology (BACT) analysis.

IPSC RESPONSE:

The Utah Air Rules and applicable guidance require that the BACT review must also consider existing BACT permit limits. UDAQ policy specifically states that a complete BACT analysis is required except where existing BACT is applicable to the source and is otherwise acceptable to UDAQ.<sup>11</sup>

Under its authority and responsibility, UDAQ properly concluded that the current technology at IPP met BACT for the uprate project.

COMMENTERS' ISSUE 9 on DAQE-049-02:

The BACT cost estimate analysis for NOx burners was inadequate.

IPSC RESPONSE:

IPSC proposed replacement of the burners for several reasons. One was the increasing deterioration of the current burners. Although IPSC believed that current burners could easily meet the proposed capacity increase, replacement as part of the uprate project could not be

<sup>10</sup> See 57 Fed. Reg. at 32314 and the Detroit Edison determination from EPA to Henry Nickel, dated 5/23/2000.

<sup>11</sup> For detailed description, see UDAQ's NSR NOI Guide on BACT

justified as replacement-in-kind at that time. Therefore IPSC sought to have the burner replacement permitted as part of the uprate project rather than replacement-in-kind. However, Utah regulations require burners not replaced-in-kind to be current technology burners that meet BACT. Since BACT analysis for burner replacement required the addition of over-fire air (OFA), IPSC withdrew its request to permit burners as part of the uprate project.<sup>12</sup> IPSC believed it had the capability to meet both increased capacity and the WEPCO emission requirements with the facility's current burner configuration. Therefore, IPSC's permit request for the burner additions was withdrawn so that new burners could be reviewed on their own merits as replacement-in-kind at a later date.

IPSC clearly indicated in its revised NOI that the WEPCO requirements could be met without new LNBs and OFA. The facility has since operated for over 22 months at its modified capacity with current burners and has easily met the WEPCO rule's "actuals to future actuals" test.

Since the BACT analysis only addressed the adequacy of the new LNB's, the use of an incremental cost analysis (in dollars per ton of pollutant removed) to meet WEPCO was appropriate.

#### COMMENTS REGARDING UDAQ's CURRENT PERMITTING ACTION FOR IPP

The following issues were presented by the Commenters with respect to the current permitting action and UDAQ's Intent to Approve (ITA):

##### COMMENTERS' ISSUE 1 on the ITA:

The Commenters indicate that IPSC needs to add OFA to meet the WEPCO rule's "actuals-to-future actuals" test and to meet the federally enforceable limits established by DAQE-049-02.

##### IPSC RESPONSE:

IPSC does not need the OFA or LNB's to meet the WEPCO requirements. IPSC has already demonstrated that it is meeting and can continue to meet those requirements under DAQE-049-02.

IPSC's intent in the current NOI and permitting action was to add OFA to forestall the impacts from deteriorating coal quality and to meet forthcoming limit reductions in Acid Rain and new legislation.<sup>13</sup> IPSC also intended to comply with the WEPCO requirements without regard to emissions that can be excluded from WEPCO accounting, such as deteriorating coal quality. However, IPSC has now decided to utilize all the exclusions allowed under WEPCO and to adjust emission calculations accordingly. OFA will not be used to account for that adjustment.

The federally enforceable limits set in DAQE-049-02 to limit PTE are another matter. As the Commenters point out, the historical baseline emission rates cannot be exceeded by a net significant amount resulting from the modification. However, emission increases not caused by the uprate project are excluded from this limitation, and IPSC can thus emit up to any federally

<sup>12</sup> IPSC's Notice of Intent dated 4/4/2001; IPSC's NOI clarification dated 9/5/2001, e-mailed to UDAQ 9/7/2001.

<sup>13</sup> IPSC's Notice of Intent dated 4/4/2001; IPSC's NOI clarification dated 9/5/2001, e-mailed to UDAQ 9/7/2001.

enforceable limit.<sup>14</sup> IPSC anticipates that those limits may become difficult to attain without additional combustion controls due to deteriorating coal quality in Utah coal mines. IPSC anticipates that more stringent federal regulations will lower allowable emission rates further. OFA is being added in preparation for such requirements.

New LNB's are also not required to meet the actuals-to-future actuals test of the WEPCO rule. IPSC has demonstrated that the current burners can attain both the uprated boiler capacity and WEPCO emissions. Since burner replacement will not increase either capacity or emissions, replacing the current burners due to obsolescence is replacement in kind, which is not a modification of the source.

#### COMMENTERS' ISSUE 2 on the ITA:

The uprate project in DAQE-049-02 and the current permitting action should have been permitted as a single project.

#### IPSC RESPONSE:

IPSC has provided a detailed discussion summarizing the process as documented in its correspondence with UDAQ. Of special note is that IPSC did not seek OFA in its uprate modification, and rejected the LNB change out as part of the project at that time. Even though both permitting actions are close in time and in association to unit operation, separate permitting is still appropriate and necessary. Although obsolescence of the burners was predicted, IPSC felt that their replacement was best approached under a separate permitting action as replacement-in-kind. OFA, however, was not a consideration until IPSC recognized that deteriorating coal quality was a significant operating issue.<sup>15</sup>

Further, nothing in federal or state regulatory framework prevents separate permitting of closely associated modifications that "are not otherwise significant."<sup>16</sup> To prevent circumvention, an analysis of accumulation of emissions from several closely related projects must be performed to show that their combined expected emissions increases do not trigger major review under PSD. As IPSC has clearly presented in its NOI's and associated correspondences, no circumvention has occurred. Those emissions major in nature have undergone the required PSD review. Emissions minor in nature, combined across all proposed modifications, are still minor, and PSD is thus appropriately and legally avoided.

#### CONCLUSION

The simplest way to test the connection between the current permitting action and the uprate permit is to address three questions:

<sup>14</sup> See 57 Fed. Reg. at 32314 and the Detroit Edison determination from EPA to Henry Nickel, dated 5/23/2000.

<sup>15</sup> IPSC's Notice of Intent dated 4/4/2001; IPSC's NOI clarification dated 9/5/2001, e-mailed to UDAQ 9/7/2001; IPSC's NOI correspondences for OFA and LNB replacement dated 9/23/02, 11/14/02 and 11/24/03.

<sup>16</sup> See EPA Draft NSR Manual, Section III.B.1, on Accumulation of Emissions.

Question 1: Are new LNB's and OFA needed to meet WEPCO for the uprate project?

Answer: No. If current burners were not predicted to fail, and if coal quality were not changing, neither new LNB's nor OFA would be necessary at this time.

Question 2: Given the current burner status and coal quality issue, would IPSC still need to install new replacement burners and OFA if the uprate project never occurred?

Answer: Yes. The burners are reaching the end of their life. IPSC is taking a proactive approach to replace them before the facility begins experiencing forced outages due to burner failures. In addition, IPSC needs to make sure it is able to meet emission limits for NO<sub>x</sub> for both NSPS and Acid Rain in light of deteriorating coal quality. Even if IPSC were still operating at the old NSPS limit of 0.50 lb/mmmbtu that was in place before the project, there would still be a predicted need to replace LNB's and install OFA.

Question 3: Taken together, would the uprate project and the current permitting action, if combined, be otherwise significant for the pollutants of concern to the Commenters?

Answer: No. The uprate project and the current burner replacement ITA are minor in overall configuration. The OFA is major for CO, and PSD was performed for it, but OFA was not part of the uprate project, nor was it needed to meet WEPCO requirements. If the projects were combined at the outset and included OFA, the permitting would still have been minor for all pollutants except CO, which has undergone PSD review.

Therefore, IPSC has clearly shown that the UDAQ has properly permitted the original uprate modifications, and the current ITA is appropriate for the current permit action.

## RECOMMENDATION

None of the issues raised by the Commenters should preclude UDAQ from issuing the approval order.

Additionally, IPSC has always intended to show WEPCO compliance as required by Condition 25 of DAQE-049-02. That condition requires IPSC to monitor and report emission increases due to the uprate project to ensure they are not significant. IPSC has good operating data from which to calculate these emissions, and even if discounting the effects of OFA reductions in NO<sub>x</sub>, which the WEPCO rule allows,<sup>17</sup> IPSC can demonstrate compliance with the "actuals to future actuals" test for emissions associated with the uprate.

<sup>17</sup> See 57 Fed. Reg. at 32325, which states that post-change monitoring must "provide a reasonable means of determining whether a significant increase in representative actual emissions" occurs due to the project.

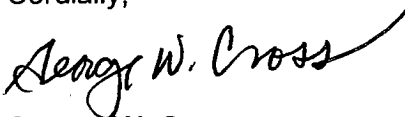
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Although the WEPCO rule has existed for some time, the practical application of WEPCO concepts are new to industry and regulatory agencies alike, and are difficult to understand and implement. IPSC commends your staff for an outstanding job in both thoroughness and detail.

IPSC also appreciates the public comment process to identify and address shortcomings that may have been missed during the permitting action. However, we were surprised that there would be objections to an increase in generating capacity with virtually no emissions increase or environmental impact. In fact, considering all environmental concerns, the addition of 150MW in Utah's generating capacity through the uprate at IPP is less of an impact than any other technology available, including generation from renewable energy.

For questions or clarification to any part of this discussion, please contact Mr. Dennis Killian at (435) 864-4414, or by e-mail at [dennis-k@ipsc.com](mailto:dennis-k@ipsc.com).

Cordially,



George W. Cross  
President & Chief Operations Officer

 BP/RJC:jmj

cc: Eric Tharp, LADWP  
James Holtkamp, Holland & Hart  
Blaine Ipson, IPSC  
Jerry Hintze, IPSC